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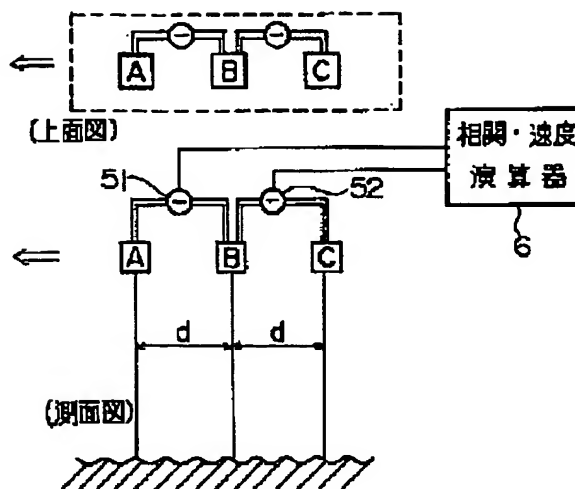
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TITLE : MEASURING EQUIPMENT FOR SPEED



ABSTRACT : PURPOSE: To prevent occurrence of an error even when distance information varies and thereby to enable measurement of a correct ground speed by determining a difference signal between distance detectors on the basis of the information on distances to light application points in prescribed numbers on an object of measurement.

CONSTITUTION: Three distance detectors A, B and C are provided at an interval (d) on the same axis being parallel to the direction of movement of a moving body. The detectors A, B and C project light at a right angle substantially onto the surface of an object of measurement and receive it therefrom and they output information on distances to the surface of the object of measurement, i.e., unevenness signals (a), (b) and (c). Differential computation units 51 and 52 execute differential computation and determine difference signals a-b and b-c respectively. A correlative speed computation unit 6 executes mutual correlation computations between the difference signals a-b and b-c, detects a delay time Z_0 between the two signals and calculates a speed V of the moving body on the basis of this time. By determining the two difference signals between the distance detectors, in other words, noise of the same phase (noise of the same phase and the same amplitude superposed on unevenness information of an output signal of each detector) generated due to variation of the distance can be cleared.

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